


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| | | | | |
|---|--|---|--|-----------------------|
| Applicant's or agent's file reference 904093 | | FOR FURTHER ACTION | | See Form PCT/IPEA/416 |
| International application No. PCT/JP2004/007528 | | International filing date (day/month/year) 24.05.2004 | Priority date (day/month/year) 30.07.2003 | |
| International Patent Classification (IPC) or national classification and IPC B60K6/04, B60L1/02 | | | | |
| Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA et al. | | | | |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | | | | |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | | | | |
| Date of submission of the demand 01.12.2004 | | Date of completion of this report 09.12.2005 | | |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80289 Munich Tel. +49 89 23999 - 0 Tx: 523656 spmu d Fax: +49 89 23999 - 4465 | | Authorized Officer Bronold, H Telephone No. +49 89 23999-2948 | | |

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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-17 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/4-4/4 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
 4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
- * If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------|
| Novelty (N) | Yes: Claims | |
| | No: Claims | 1-15 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-15 |
| Industrial applicability (IA) | Yes: Claims | 1-15 |
| | No: Claims | |

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

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Re Item V.

1. The following documents are referred to in this communication:

- D1 : DE 100 41 538 A (HONDA MOTOR CO LTD) 5 April 2001 (2001-04-05)
D2 : US 5 566 774 A (YOSHIDA MASATO) 22 October 1996 (1996-10-22)
D3 : EP 0 511 654 A (TOYOTA MOTOR CO LTD) 4 November 1992 (1992-11-04)

2. Novelty Art. 33(1) and (2) PCT

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.
Document D1 discloses (the references in parenthesis applying to this document):

A control apparatus of a vehicle equipped with an electric motor generating drive power, a charging mechanism supplying electric power to said electric motor, and a catalyst purifying gases emitted as the drive power of said vehicle is generated, comprising:
first control means (column 1, lines 38, 39, figure 4, "Antriebskraft-Steuer/Regeleinrichtung") for running the vehicle by the electric motor supplied with electric power from said charging mechanism in accordance with an operation of a driver ,
determination means (column 2, lines 42 to 44, figure 3, "...Datendetektor...zum Erfassen einer Katalysatortemperatur") for determining whether said catalyst requires to be warmed or not,
second control means (column 1, lines 38, 39, figure 4, "Antriebskraft-Steuer/Regeleinrichtung") for running the vehicle by the electric motor supplied with electric power from said charging mechanism when it is determined that the catalyst requires to be warmed up, and
prohibition means (column 3, lines 13 to 20, "...korrigiert die Steuer-Regeleinrichtung einen Befehlswert des Maschinendrehmoments, wenn der Katalysator...aufgewärmt wird") for prohibiting control by said first control means based on a predetermined condition as to whether execution of control by said

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second control means is possible or not.

Thus, all features of claim 1 are already known from the disclosure of D1. Therefore, the subject matter of claim 1 is not new in the sense of Art. 33(1) and (2) PCT.

It is further noted that although the applicant argues that document D1 does not disclose the first control means for running the vehicle by the electric motor, this feature is clearly disclosed in D1 in column 1, lines 38 to 45 reading "Antriebskraft-Steuer/Regelvorrichtung...wobei das Hybridfahrzeug durch die Ausgabe...des Motors angetrieben wird". Thus, D1 discloses the first control means for running the vehicle by the electric motor.

The feature under discussion is further regarded to be implicitly disclosed by any hybrid vehicle no matter whether it is a hybrid vehicle of the serial or parallel type. It is the primary concept of a hybrid vehicle to have the ability to use the electric motor for driving.

Moreover, the features first control means, second control means and prohibition means according to the wording of claim 1 are merely defined by their purpose ("first control means for"). On the one hand, this wording leads to a very broad scope of protection but on the other hand any means that is suitable for the defined purpose is novelty destroying for such features. This applies as long as it is directly and unambiguously derivable for the skilled person that the means is suitable for the intended purpose no matter whether the intended purpose is in fact stated by the novelty destroying document.

For the sake of completeness it is pointed out that the subject matter of claim 1 is also known from the disclosure of D3, column 3, line 29 to column 4, line 25 where it is stated that a hybrid vehicle is purely electrically driven in order to warm up the engine or the catalyst.

- 2.2 Independent claim 6 claims protection for the same subject matter as claim 1. Therefore, the above said with respect to claim 1 applies mutatis mutandis to the

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subject matter of claim 6.

Thus, all features of claim 6 are already known from the disclosure of D1. Therefore, the subject matter of claim 6 is not new in the sense of Art. 33(1) and (2) PCT.

- 2.3 The subject matter of claim 11 relates to a purposive use of the apparatus defined in claim 1. Therefore, the above said with respect to claim 1 applies mutatis mutandis to the subject matter of claim 11.

Thus, all features of claim 11 are already known from the disclosure of D1. Therefore, the subject matter of claim 11 is not new in the sense of Art. 33(1) and (2) PCT.

- 2.4 Dependent claims 2-5, 7-10 and 12-15 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

An engine according to claims 2, 7 and 12 is already known from the disclosure of D1 (column 1, line 40).

Using the residual charge of a charging mechanism as predetermined condition as claimed in claims 3, 4, 8, 9, 13 and 14 is also known from the disclosure of D1 (column 1, lines 58 to 63).

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Re Item VII.

1. Clarity Art. 6 PCT

- 1.1 Although claims 1 and 6 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and do not even differ in terminology. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

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1.2 The same objection applies to the relevant dependent claims 2 to 5 and 7 to 10, respectively. Thus, also the claims 2 to 5 and 7 to 10 do not meet the requirements of Art. 6 PCT with respect to conciseness.

1.3 Further, claims 1, 6 and 11 define first and second control means and prohibition means for excluding control by the first control means. However, the criteria for prohibiting or not prohibiting the control by the first control means remain open in the subject matters of claims 1, 6 and 11 ("predetermined condition"). Therefore, the subject matters of claims 1, 6 and 11 are not defined.

Moreover, in claims 1, 6 and 11 it is defined that control via the first control means is prohibited if a predetermined condition is satisfied. However, no positive definition can be found in the subject matter of those claims how and by which means the control is performed after the control via the first control means has been prohibited.

Consequently, the subject matters of claims 1, 6 and 11 do not fulfill the requirements of Art. 6 PCT with respect to clarity.

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